

PRADEEP KUMAR

Senior Solution Architect & Engineering Leader | Scalable Platforms, Cloud-Native Microservices & AI/ML Solutions

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PROFESSIONAL SUMMARY

Solution Architect and Engineering Leader with **14+ years of hands-on experience** designing and operating high-concurrency distributed platforms, cloud-native microservices, mobile ecosystems, and AI/ML applications across fintech, retail, media, and security domains. Currently pursuing **e-PG Diploma in Artificial Intelligence & Data Science from IIT Bombay**. Proven track record translating complex business goals into resilient software architecture, leading cross-functional teams, establishing TDD and DevOps governance, modernizing legacy backend components, and championing active open-source contributions.

CORE SKILLS

Backend & Platform Architecture: Java, Python, Spring Boot, Spring, Node.js, Express, Koa, PHP, Drupal, REST & GraphQL APIs, Microservices Architecture, API Design & Management, Cloud-Native Systems, TDD, Design Patterns

Databases & Event Platforms: MongoDB, MySQL, Redis, Cassandra, Kafka, WebSockets / Socket.io, Sequelize, Schema Governance, Data Caching, Transaction Optimization

Frontend & Mobile Stack: ReactJS, React Native, Redux, Vue.js, Vuex, Angular, Ionic, PWA, KnockoutJS, HTML5/CSS3, Sass, Mobile Security & KeyStore

Cloud, DevOps & Reliability: AWS, Google Cloud, Azure, Firebase, Docker, CI/CD Pipelines, JUnit, Mockito, PyTest, unittest, Jest, Cypress, Observability, RCA-driven Reliability, System Performance Tuning

AI, ML & Emerging Tech: Artificial Intelligence, Machine Learning, Data Science (IIT Bombay), Conversational AI, NLP Pipelines, Blockchain & Cryptographic Identity (SSI, Sovrin Network)

Leadership & Governance: Solution Architecture, Technical Leadership, Agile/Scrum Management, Microservice Governance, Code Reviews, Release Planning, Cross-Functional Alignment, Developer Mentorship

PROFESSIONAL EXPERIENCE

SwissClear / TAPPP Pune, India Solutions Architect Tech / Environment: AWS, Python, FastAPI, Java, Spring Boot, AWS Bedrock, Agentic AI, Microservices, WebSockets, Event-Driven Architecture, TDD	MAR 2024 - PRESENT
• Platform Architecture & Modernization: Architecting scalable distributed platforms, microservices, event-driven systems, and Java-to-Python/FastAPI modernization. • Global Client Ecosystem: Delivered solutions across DTV, Globo, FIFA, Roku, BetPlay, Blackhawk Network, LiveLike, Adyen, Adidas, Kraken, and Kalshi. • Sports & Interactive Experiences: Built platforms supporting live sports engagement, interactive TV, betting, rewards, and real-time fan experiences. • Agentic AI & Automation: Driving Agentic AI, AWS Bedrock, AI agents, intelligent workflows, recommendation systems, and decision-support capabilities. • Engineering Leadership: Leading and mentoring senior engineers across architecture, technical decisions, code quality, production RCA, and platform governance.	
Paytm Noida, India Solution Architect cum Senior Tech Lead Tech / Environment: Java, Spring Boot, Microservices, Node.js, React, Redis, Kafka, Payment Gateways, Enterprise Systems, REST APIs	MAY 2022 - MAR 2024
• Digital Payment Infrastructure: Architected high-throughput, secure digital payment microservices powering high-concurrency transaction streams under zero-downtime reliability (99.99% SLA).	

- **Paytm Incentive Management:** Spearheaded end-to-end engineering for enterprise platform configuring, calculating, and disbursing performance incentives with real-time auditability.
- **Event-Driven Distributed Services:** Engineered resilient backend services using Java (Spring Boot) and Node.js with Kafka distributed streaming, Redis caching, and financial compliance.
- **Technical Governance & Leadership:** Governed technical design reviews, CI/CD automation, release planning, and production incident post-mortems (RCA) while mentoring senior engineers.

Walmart Global Tech | Bengaluru, India

DEC 2020 - MAY 2022

Software Engineer IV (Solution Architect)

Tech / Environment: Java, React Native, Node.js, Microservices, Cloud Platforms, Enterprise Mobile Apps, Memory Optimization, TDD

- **Enterprise Platform Architecture:** Directed system design and technical roadmap for enterprise associate platforms, aligning multi-tier distributed systems with global retail scale.
- **Me@Walmart Mobile Ecosystem:** Architected core modules and backend services for flagship mobile platform serving hundreds of thousands of daily active associates across store ecosystems.
- **Performance & Technical Debt:** Led deep technical debt refactoring across Java & Node.js services, cutting mobile memory consumption and substantially accelerating API response times.
- **Global Release Governance:** Instituted rigorous TDD engineering practices and multi-region deployment planning across global US and India engineering pods.

Netomi | Gurugram, India

MAY 2018 - DEC 2020

Technical Leader (AI Studio)

Tech / Environment: Python, Node.js, AI/ML Chatbots, NLP Pipelines, Microservices, WebSockets, MongoDB, Redis, AWS

- **Conversational AI & NLP Platform:** Architected backend platforms at Netomi AI Studio powering AI virtual assistants, NLP intent resolution, and customer service automation for Fortune 500 enterprises.
- **Real-Time Event Pipelines:** Designed low-latency WebSockets communication channels and event-driven microservices handling millions of automated customer conversations with high concurrency.
- **Full-Stack Workflows:** Engineered modular services using Python, Node.js, MongoDB, and Redis on AWS, enabling non-technical teams to visually train and deploy bot decision trees.
- **Team Leadership & Mentorship:** Led cross-functional developer squads, managed sprint roadmaps, stakeholder deliverables, and drove engineering execution excellence.

Evernym (An Avast company) | Hyderabad, India

JAN 2015 - MAY 2018

Senior Software Engineer

Tech / Environment: Python, C++, React Native, Sovrin Ledger, Self-Sovereign Identity (SSI), Cryptography, KeyStore, Node.js

- **Sovrin Public Ledger Ecosystem:** Led a team of four engineers building core client applications and full-stack infrastructure for Sovrin Network decentralized digital identity platform.
- **Connect.Me Cryptographic Wallet:** Architected mobile identity wallet enabling Self-Sovereign Identity (SSI), pairwise encrypted peer-to-peer channels, and zero-knowledge credential proofs (ZKP).
- **Open-Source Cryptographic Security:** Authored and published React Native Key Store (react-native-secure-key-store) providing hardware-backed key isolation via iOS KeyChain & Android KeyStore.
- **Engineering Honors:** Honored with the 'Extra Mile Award' for foundational cryptography research, architectural leadership, and open-source infrastructure delivery.

Soldag Technologies | Gurugram, India

AUG 2012 - DEC 2014

Software Engineer

Tech / Environment: PHP, Drupal, MySQL, JavaScript, HTML5/CSS3, REST APIs, Client Engagement

- Managed complete project lifecycles from requirement discovery to production deployment for international clients.
- Engineered responsive web portals, custom backend modules, and relational database schemas optimized for performance and security.

KEY PROJECTS & OPEN SOURCE

- **TAPPP MicroApp Platform** [[Java](#), [Python](#), [AWS](#), [WebSockets](#)] — Real-time sports betting micro-app platform integrated into live TV broadcasts (Major League Rugby partnership) with sub-second odds feed processing.
- **Paytm Incentive Management** [[Java](#), [Spring Boot](#), [React](#), [Kafka](#), [Redis](#)] — High-throughput enterprise reward calculation and transaction disbursement engine with zero-downtime compliance.

- **Me@Walmart Mobile Ecosystem** [[Java](#), [React Native](#), [Node.js](#), [Microservices](#)] — Global workforce mobile platform serving hundreds of thousands of daily active associates across multi-device ecosystems.
- **Netomi AI Studio Engine** [[Python](#), [Node.js](#), [WebSockets](#), [MongoDB](#), [Redis](#)] — Conversational AI and NLP virtual assistant platform automating millions of enterprise customer conversations.
- **Connect.Me Identity Wallet** [[React Native](#), [Sovrin Ledger](#), [Cryptography](#)] — Cryptographic digital identity wallet enabling self-sovereign identity (SSI) and zero-knowledge credential verification.
- **React Native Key Store (Open Source)** [[Java](#), [Objective-C](#), [React Native](#)] — Hardware-backed secure key storage library for iOS KeyChain & Android KeyStore (github.com/pradeep1991singh/react-native-secure-key-store).
- **Sovrin Network Infrastructure (Open Source)** [[Python](#), [C++](#), [Cryptography](#)] — Public ledger and decentralized identity network enabling self-sovereign digital identity (github.com/sovrin-foundation/sovrin).

EDUCATION & QUALIFICATIONS

e-PG Diploma in Artificial Intelligence & Data Science — *IIT Bombay*

Currently Pursuing

Centre for Machine Intelligence and Data Science

(minds.iitb.ac.in/academic-details/e-pg-diploma-in-ai-and-ds)

Bachelor of Technology (B.Tech) — *Ch. Devilal Memorial Govt. Engg. College, Sirsa*

2008 – 2012

Achieved 70.04% in Computer Science & Engineering coursework.

HONORS, AWARDS & ACTIVITIES

- **Best Leader Award:** Recognized for outstanding leadership in technical delivery, team mentorship, and project execution.
- **Extra Mile Award:** Recognized as the first engineer to complete comprehensive engineering reflections assignment and drive core standards.
- **Activities & Interests:** Science Fest Coordinator, 10km Marathon Runner, Anime, Table Tennis, Badminton, Cricket, Foosball.